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# Retrograde Mosaicplasty By Using Hip Arthroscopy For A Large Osteochondral Femoral Head Lesion

*A Case Report*

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# Case presentation

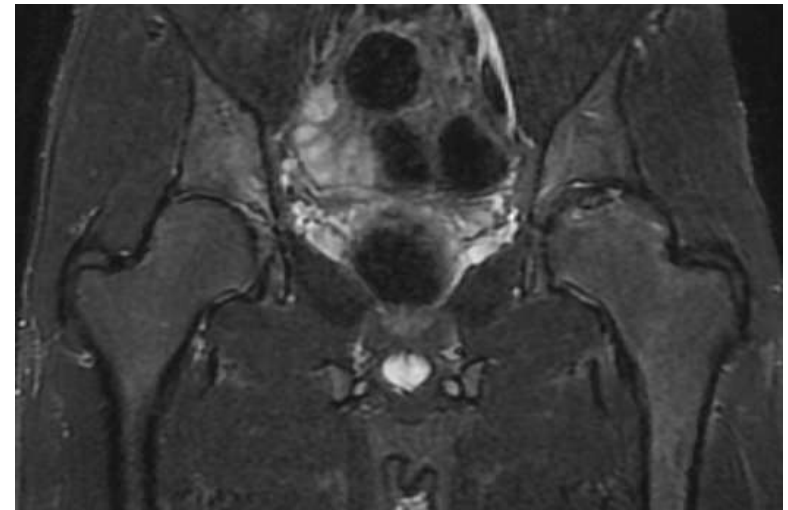


- A healthy 27-year-old male patient
  - left groin pain for 10 months of duration
  - mechanical symptoms included catching and locking
  - no history of distinct trauma, systematic disease, developmental or congenital hip diseases
- On clinical examination
  - antalgic gait pattern / ambulated with a cane
  - hip range of motion (ROM) not restricted; BUT painful in extremes of passive flexion, internal rotation and abduction
- Harris hip score - 62 points
- No history of conservative treatment prior to admission

# Case presentation



- Initial radiographs and CT scans
  - A focal osteochondral defect on the weight-bearing surface of the left femoral head
  
- MRI scans
  - Osteochondral separation without any displacement and evidence of major fragment collapse



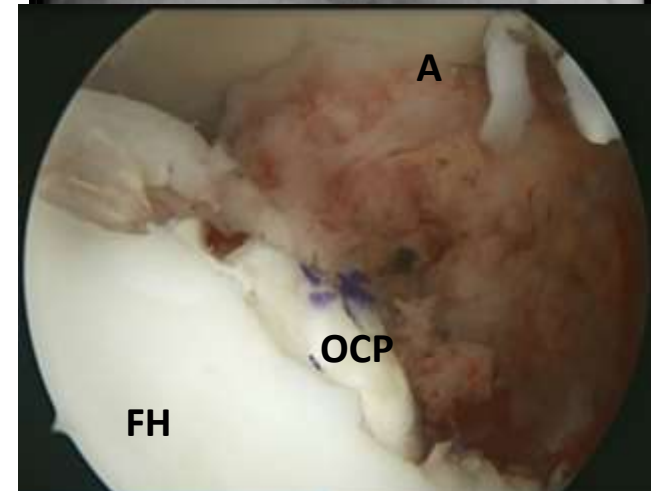
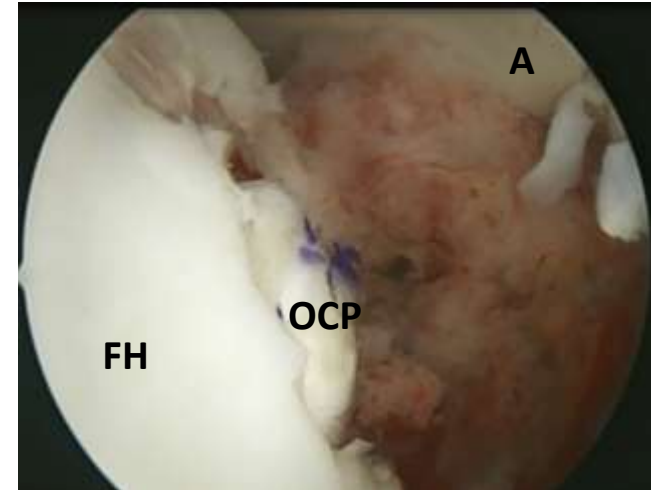
# Surgical technique

- Hip arthroscopy in supine position on fracture table
  - No acetabular labral tear and distinct FAI
  - A round osteochondral defect (Outerbridge grade 4) with 10 mm in dia identified at superior dome of the femoral head
- Chondral lesion was excised and the defect area was curetted and shaved
- Under fluoroscopic control; 1,5 mm dia K wire was sent from the lateral border of the femur below the trochanter major and the tip of the K wire was visualized with arthroscope
  - Overdrilling over the K wire with a 10 mm dia
- 10 mm dia osteochondral plug with 15 mm in depth harvested from lateral border of left medial femoral condyle using OATS system (*Arthrex, Naples, Florida, USA*)



# Surgical technique

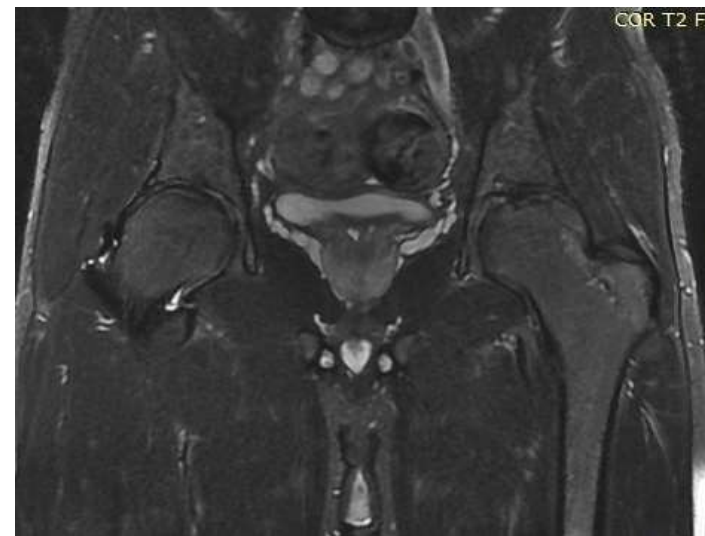
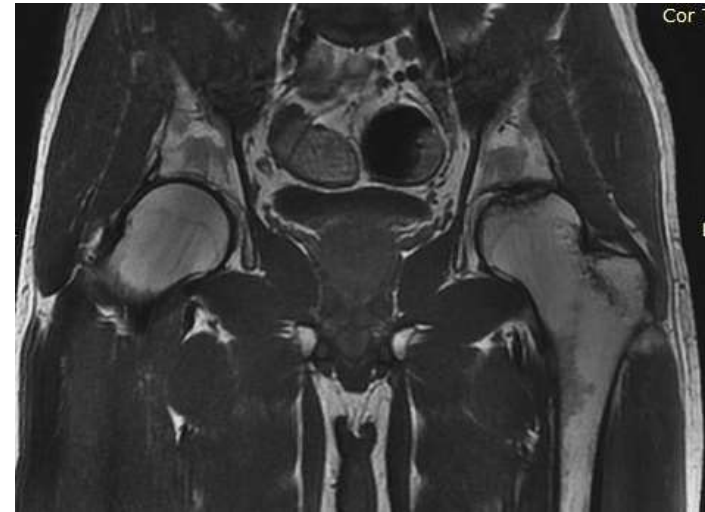
- The harvested plug was inserted in retrograde fashion and positioned with spherical surface of femoral head cartilage
- The femoral tunnel was filled with a 60-ml spongioid allograft
- No peri- and postoperative complications related to the procedure
- Active and passive hip ROM exercises on second day post-op
- Patient was mobilized without weight bearing with 2 crutches for 6 weeks
- At the end of 6th week, he started gradually weight bearing and at the end of 10th week, he was allowed to walk with full weight bearing



# Results



- At the final follow-up  
(*26 months postoperatively*)
  - full hip ROM without additional complaints of rest pain or pain related to activities
  - Postoperative Harris Hip score - 96 points
- Postoperative radiographs at final follow-up showed near-complete incorporation of graft with preservation of native joint space
- MRI scans confirmed stability of the osteochondral plug and on-going healing





# Conclusion

- Despite satisfactory results and advantages of wide exposure of entire femoral head, mosaicplasty technique applied by surgical hip dislocation is an invasive procedure
- On the other hand, hip arthroscopy as minimally invasive procedure, has gained popularity in recent years and its indications have shifted from a diagnostic tool to therapeutic one
- According to the result of the present case, we conclude that mosaicplasty procedure can be applied in a retrograde fashion by using hip arthroscopy without the need of surgical hip dislocation and may be an alternative treatment option for osteochondral defects of the femoral head in young adult patients

***Thank you ...***